ATTACHMENT 6

The National LEC "8XX" Planning Document

The National LEC "8XX" Planning Document

Contents

1. INTRODUCTION

1.1 PURPOSE

This report documents the results of a review conducted by the large local exchange carriers (LECs) to determine the requirements for opening the remaining toll free NPAs (877, 866, 855, 844, 833, 822). The LEC committee that developed this report, the National LEC 800 Product Team, is comprised of representatives from: Ameritech, BellSouth, NYNEX, Pacific Bell, U S WEST, Southwestern Bell Telephone Company, GTE Telephone Operations, Cincinnati Bell, Southern New England Telephone Company, Stentor Resource Centre, Inc., and the United States Telephone Association.

This document serves as a guide for implementing the remaining toll free NPAs (877, 866, 855, 844, 833, 822). It also explains the steps and associated timeframe anticipated for implementation of the 877 code, while demonstrating the differences that exist between the 877 project and any future code openings. This document should be referenced by any industry participants, either as individuals or in forums, whenever discussing plans for opening future 8XX toll free codes. It will also be used as a foundation for the Product Team once implementation of the next toll free codes becomes necessary.

1.2 BACKGROUND

In late 1994, the telecommunications industry and the FCC realized that the toll free 800 resource was approaching exhaust. An industry decision[1] was made to remedy the exhaust situation by opening a new toll free NPA. The 888 code was chosen as the first new code, with 877, 866, 855, 844, 833, and 822 reserved for future exhaust relief. The 888 toll free code was opened in the United States and Canada on March 1, 1996. The project required significant changes to various elements of the LEC network, including modifications to switch software, network database hardware and software, and the national Service Management System (SMS/800) environment. This process took over a year and tens of millions of dollars to implement nationwide. Almost immediately after the 888 code was implemented, the industry's attention turned to what steps should be taken to prepare for 888 exhaust. Current consumption rates for 888 number use indicate that the 888 code will likely approach exhaust in mid-1998.

The National LEC 800 Product Team conducted a detailed investigation into the requirements for opening the remaining 8XX codes. Discussions with switch vendors and database developers were included. The results were evaluated and this report was developed.

1. INC Meeting, January 25, 1995.

2. EXECUTIVE OVERVIEW

When implementing the new toll free NPA code, 888, LECs were required to make significant modifications to several elements of their networks. These elements included local switches (end offices and tandems), network databases (Service Control Points - SCPs), and the national 800 Service Management System (SMS/800) database. Provisions were made wherever possible to handle the additional toll free codes (888, 877, 866, 855, 844, 833, and 822). This document explains the status of current work efforts in the local exchange networks of the National LEC 800 Product Team companies.

LEC networks are currently processing 888 traffic. However, additional work exists for the remaining codes (877, 866, 855, 844, 833, and 822). Looking specifically at 877, the necessary changes to LEC networks and to the national database could be implemented during the third quarter of 1997 if required. Based on the existing consumption rate of 888 numbers, this schedule is timely and should provide an adequate supply of toll free numbers. The remaining codes (866, 855, 844, 833, and 822), however, have less definite time frames established and will be significantly more complex to implement. Hardware and software changes will be required to expand existing network elements to include the additional 8 million numbers that are enabled with each new code. However, since 866 should not be necessary until 877 is approaching exhaust (estimated to be some time after the year 2000), there is time to evaluate technical alternatives as they become available over the next few years.

The National LEC 800 Product Team companies are committed to monitoring the status of toll free codes and to initiate the work activities needed to meet the industry's needs. The first step could be the availability of 877 in the later part of 1997 if needed, while giving close attention to the subsequent need for 866 and the vendor capabilities at that time. Final implementation plans will be developed once the need for a new code has been identified.

3. NETWORK COMPONENTS

3.1 SWITCHES 877, 866 AND BEYOND

A survey of switch manufacturers indicates that the software developed for the introduction of 888 also supports 877. The availability of software to support codes beyond 877 (i.e., 866, 855, 844, 833, and 822) varies by supplier and switch type. For example, one major supplier has developed a capability for all 8XX codes, while another has developed only 888 and 877. Additionally, certain suppliers have developed the capability for all 8XX codes on some of their switch types but not on others. Furthermore, some suppliers have announced a strategy of requiring carriers to process their 866 – 822 traffic on an AIN platform.

Activating 877 toll free access in LEC networks is expected to be relatively straightforward. Work will be required to test the 877 capability and the 877-related translations in switches and other network elements. Based on recent experience with 888, it is feasible to put 877 in service within 6 months of the identification of the impending need.

On the other hand, the introduction of 866 presents far more uncertainty than the progression from 888 to 877. Early information obtained from the switch suppliers indicates that not all switches currently in service will be upgraded to support the 866 code. Some switch suppliers have announced that support of 866 (etc.) will require changes in IN/AIN platforms. The preliminary information received indicates that suppliers will be releasing 866 software over a 15 month window beginning in 3Q96. The uncertainty concerning 866 support on existing switching systems and the protracted interval for release of 866 software does not provide the same assurances that we have for initiating 877 within a specific time interval.

3.2 STP 877, 866 AND BEYOND

A survey of STP manufacturers indicates that the software developed for the introduction of 888 supports all 8XX codes.

3.3 SCP 877, 866 AND BEYOND

Bellcore's Service Control Point (SCP)/800 was developed using a generic approach that would support all identified toll free codes of the 8XX format. To meet the February 1996 deployment deadline for 888, however, the only testing that was fully executed was for the 888 code. This is important for two reasons. First, even though all codes should perform consistently, it will still be necessary to insure that 877 (etc.) operate in the precise manner of 888 and 800. Second, and most important, it will be necessary to insure that the SCPs can handle the increased load of another code.

When 888 was implemented, it was necessary to double the record storage capacity of the SCPs (the SCPs were originally engineered to handle the 8 Million records associated with 800). Adding each new code adds 8 million new numbers; therefore, adding 888 required re-engineering of the SCPs.

Many of the SCPs in the LEC networks are approaching maximum record storage capacity. Therefore, in addition to requiring re-engineering, adding the 877 code will require new software techniques to maximize performance. This can be accomplished as a part of the regular SCP release cycle in third quarter 1997.

Adding the 866 code will require significant changes to the current SCP configuration. Each SCP owner will have to analyze their needs and plan for the necessary upgrades. Since the 866 code should not be necessary until sometime after the year 2000 and technology is

likely to change by then. SCP owners will likely postpone designing and implementing changes for 866 and subsequent codes.

3.4 SMS/800 877, 866 AND BEYOND

Modifications to the SMS/800 software for handling the 877 code are scheduled to be installed on the SMS/800 system in March 1997. The hardware configuration for the SMS/800 system will be capable of handling the capacity required for 877.

Opening the 866 and subsequent codes will require evaluation of capacity and processing loads. Current technology requires significant memory and storage upgrades to handle such a load increase. Based on the assumption that the 888 code will not exhaust until mid to late 1998, and further assuming that 877 will meet industry demands until well into the year 2000 or 2001, no plans are being made at this time to upgrade the SMS/800 system to handle the additional load resulting from the 866 and subsequent codes. Technological changes between now and when the need for implementing 866 (etc.) arises, would certainly obsolete any upgrade plans developed at this time. The consumption rate for 888 and 877 will be watched very closely and planning for 866 will begin as soon as necessary.

4. REGULATORY AND INDUSTRY ISSUES

4.1 REGULATORY ISSUES

The only readily identifiable regulatory impact to this plan is the anticipated order in CC Docket No. 95-155, In The Matter of Toll Free Access Codes.

In CC Docket No. 95-155, the FCC issued a Notice of Proposed Rule Making (NPRM) on October 5, 1995. The NPRM indicates that the FCC expects that the industry will improve its ability to timely identify code exhaust in order to allow sufficient time for implementation of a new code prior to exhaust. The NPRM touches on several options that could be employed to accomplish this goal.

The NPRM proposes several solutions for the introduction of a new code. It should be noted that a different set of activities and time frames are required for going from 888 to 877 than are required for the addition of 866 and subsequent codes. Most incumbent LEC systems currently can accommodate 877 with less activity than will be required for codes beyond 877. Codes beyond 877 may require new technology, hardware or software that is not currently available, under development, or in place.

At this time there is no indication as to when an order will be issued on the NPRM. The various proposals outlined in the NPRM may or may not be mandated in the order. It is therefore not possible to finalize a network plan until an order is received.

4.2 INDUSTRY ISSUES

There are many industry related issues involved in 8XX implementation planning. The first deals with developing the criteria to determine what should trigger the opening of the next 8XX code for toll free service. The same criteria would need to be established for opening 866 and the subsequent codes. This is the subject of discussion in two industry forum groups: the SMS/800 Number Administration Committee (SNAC); and the Industry Numbering Committee (INC). It will be very important for these committees to be familiar with this 8XX Planning Document when finalizing their plans.

Another industry issue associated with toll free code openings involves test plans. The Network Operations Forum (NOF) generally develops model test plans for local and interexchange carriers. Even though the industry has experience in opening the 888 code, the NOF should evaluate this planning document before developing an 8XX Network Testing Plan. Their test plan should consider the timeframes included in this planning document for implementation, testing, and the network conversion. Lessons learned from the 888 project should also play a major role in the development of an industry test/ conversion plan.

5. CONCLUSION

The National LEC 800 Product Team is planning to be able to handle 877 traffic by the third quarter of 1997 if required. This schedule should more than meet industry demand. The remaining codes, 866 (etc.), however, require a different schedule. Unknowns associated with vendor plans and expected exhaust dates have made it more difficult to specifically define when LEC networks will be able to handle these codes. Product Team companies will work closely with industry forums to monitor the need for expanded toll free codes. Once a need has been identified, formal implementation plans will be developed.

NIIF ISSUE IDENTIFICATION FORM
ISSUE TITLE: 877 Toll Free Implementation Test Plan

ISSUE ORIGINATOR: Allan D. Jones
COMPANY: Pacific Bell
TELEPHONE #:
FAX#:
E-MAIL ADDRESS:

REQUESTED RESOLUTION DATE:
Is this an ESP Request (Y/N)

ISSUE #: 0019
FORMER ISSUE#: NOF 252
DATE ACCEPTED: 9/9/96
COMMITTEE ASSIGNED: NIM
CURRENT STATUS: ACTIVE
RESOLUTION DATE:
ISSUE CHAMPIONS:
(optional)

ISSUE STATEMENT:

The industry as a whole has determined that the current 800/888 toll free number resources are due to exhaust in the near future, approximately within the next 15 to 18 months. The current NOF toll free service implementation plan doesn't address the implementation of 877.

SUGGESTED RESOLUTION:

The NOF ITM committee should direct the NOF Secretary to initiate a global change to the current Toll Free Implementation plan to reflect the implementation of 877. The ITM committee should then review the plan for completeness and upgrading predicated on the nuances if any of 877. All affected companies should then develop and have on hand a listing of the affected network nodes with their respective upgrade dates and the dates by which interconnect testing can commence to validate routing and billing.

OTHER IMPACTS (if any):

CURRENT ACTIVITY:

9/9/96: Status - Active

Issue accepted at General Session #56, Assigned to the ITM Committee

10/31/96: Status - Active

James Walden (SWBT) reported out relative to liaison from SNAC to NOF on 877 Implementation Plan.

Path Forward:

Have James Walden (SWBT) take back to the SNAC that the NOF will use the 888 Test Plan and modify the plan to facilitate 877, with appropriate dates for implementation.

A formal reply to the SNAC will be drafted by the NOF Moderator, stating:

The NOF will provide any information relating to 877 implementation testing and request a firm implementation date from SNAC to develop the milestones.

With their concurrent will designate James Walden (SWBT) as liaison between NOF and SNAC.

Action Items:

- James Walden (SWBT) will take back to SNAC that the NOF will use the 888 Test Plan and modify the plan to facilitate 877, with appropriate dates for implementation.
- A formal reply to the SNAC will be drafted by the NOF Moderator, stating that the NOF will provide any information relating to 877 implementation testing and request a firm implementation date from SNAC

01-09-97 Status: Active

A work group consisting of the following people was formed to begin work on an 877 Test Plan:

Jim Marshall - US WEST
Allan Jones - Pacific Bell
James Walden - SWB
Lou Tiboldo - NECA
Norb Lucash - USTA
Leonard Chun - Sprint
Gerry Brown - BellSygma
Wayne Brock - GTE LD
Robin Meier - Ameritech
Bob Schafer - MCI
Charlie Abruzzo - Bellcore

The Work Group will hold a conference call on February 18, 1997, hosted by MCI. (1:00 - 3:00 pm ET)

02-18-97 A conference call was held, and the following action items were assigned:

- Participants will research when their switch software will be upgraded, SCPs will be upgraded and when internal company testing will be complete for 877 so that 877 call-through testing can begin. The proposed date is 2/21/97.

- Participants will report if they intend to use any nodes other than what have been used for 800/888 (e.g., AIN).

- Angela will distribute the National LEC Product Team 8XX Implementation Plan with this meeting record

UPDATED: 03/05/97

- Companies will determine how many test numbers they require for call through testing purposes and report back at NIIF #2 NIMC.

- IXCs will determine any specific or unique requirements for 877 testing and report back to the NIMC at NIMC #2.

- Charlie Abruzzo will forward the 888 Testing Schedule Template to the NIIF Secretary for distribution (At

- Participants will review the 888 Test Plan and determine what activities are required for the 877 Test Plan and report at NIMC #2.
- James Walden (SWB) will report to the SNAC that the NIIF 877 Test Plan should be resolved by its October 20, 1997 meeting.

- James Walden will provide a read-out at the June NIIF regarding the status of the SMS/800 877 upgrade. He will also send an e-mail report to the NIIF Secretary on June 30 regarding SMS/800 readiness for 877. This e-mail will be distributed to the NIMC.

- The NIIF Leadership will draft a letter (via the the CLC external correspondence process) to the FCC regarding NIIF 877 Test Plan activities . They should also inform the CLC of this activity at its agenda setting conference call.

- Charlie Abruzzo will work with DSMI to determine what procedures should be used for administering 877 test numbers and report at NIMC #2.

- IXCs will inform their local counterparts about this issue and related action items.

03/05/97

Agreement Reached:

- Activities 38-40 on the SNAC 877 Implementation Plan should be consolidated and renamed: NIIF Test Plan Activities". The description should be: "NIIF Test Plan activities network to network and national testing".
- 877 Test Number Assignment Process will reside as an Attachment referenced in Section 1.3.1: Administration and Availability of 877 250 Test Numbers.

Action Items:

- Participants will review the 888 Test Plan and Charlie Abruzzo's contribution regarding modifying the 888 Test Plan to the 877 Test Plan for further discussion at NIMC #3.

UPDATED: 03/05/97

- James Walden will determine if the NASC has been renamed and report back.
- Charlie Abruzzo, Lou Tiboldo, and Gerry Brown will draft/revise introduction language in Section 1.1.
- Participants will determine if all appropriate SCPs/Tandems and end offices will be 877-ready by 2/21/98. Each company should also determine planning dates for first/last end office deployment.
- Charlie Abruzzo will determine if Test Case #1 (repartition of 800 data) and related language in Section 5.1: Batch Processing Stress Tests applies to 877.
- Participants will review the draft 877 Test Plan for further discussion at NIMC #3.

04/28/97: Status - Active

Agreement Reached:

- It was agreed to utilize updated Background language, as provided in Attachment X for inclusion in the 877 test plan
- It was agreed to include the contribution on a revised Part II in the 877 Test Plan. (Attachment 8 of NIM #3 meeting record)
- It was agreed to review and keep sections 1, 6, and 8 of the 888 test plan for use on the 877 test plan.
- It was agreed that the test number procedures as provided at NIMC #2 will be provided as an attachment to the 877 test plan.
- It was agreed that test numbers will not be deleted after cutover unless specifically requested by individual carriers.
- It was agreed to delete the SCP - LATA Map attachment from the 877 Test Plan.

Action Items:

- The NIIF Secretary will renumber the attachments in the 877 Test Plan.
- The NIMC Co-Chairs and NIIF Secretary will update the 877 Test Plan based on contributions received for further review at NIMC #4.
- The NIIF Secretary will attempt to locate the 800/888 Trouble Reporting Contact Directory for (refer to Issue 225) inclusion in the 877 Test Plan. If it cannot be located, an e-mail will be sent to all participants so that they can gather the information.
- Participants are to review the updated 877 Test Plan prior to the NIMC #4 in order to move it to initial closure.

06/26/97: Status - Active

Action Items:

- Participants are to provide any changes for the 877 Toll Free Implementation Plan to NIMC Co-Chairs.

- Participants are to review the 800/888 Trouble Reporting Contact Directory.

- NIIF Secretary will send the Trouble Reporting Directory and Test Number Directory via e-mail to all NIMC participants to be updated. Updates should be provided to the NIIF Secretary by Wednesday, July 16, 1997.

- James Walden (SWBT) will provide NIIF Secretary with a brief description of 877 Test Numbers for inclusion in the e-mail to be distributed by NIIF Secretary.

Agreement Reached:

- Participants agreed to keep Issue #0019/NOF252: 877 Toll Free Implementation Plan in active status.

RESOLUTION:

DOCUMENTATION REQUIREMENT:
(optional)

Alliance for Telecommunications
Industry Solutions

Sponsor of the

Network Interconnection/
Interoperability Forum

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May 8, 1997

Ms. Regina M. Keeney
Chief, Common Carrier Bureau
Federal Communications Commission
1919 M Street, NW
Suite 500
Washington, DC 20554

Dear Ms. Keeney:

This correspondence is to apprise you of the efforts of the Alliance For Telecommunications Industry Solutions (ATIS) - sponsored Network Interconnection Interoperability Forum (NIIF) with regard to developing an industry-wide test plan to ensure the successful implementation of the next toll free code, 877.

At this point in time, an issue (NIIF # 19) addressing the need for and the development of a Test Plan is before the Network Installation and Maintenance Committee (NIMC) of the NIIF. The committee participants are reviewing the existing 888 test plan to amend it to reflect the new toll free code of 877 and ensure that the appropriate areas of concern are addressed.

The NIMC is projecting that the plan will be completed no later than October 21, 1997 and that industry testing will commence no later than February 21, 1998, and be completed no later than April 3, 1998, this does not preclude any Service Provider from continuing call-through testing right up to the actual implementation date of April 4, 1998. This plan presumes that all service providers will test their respective networks to their company specifications prior to the commencement of the industry test date.

Should you have any questions in regard to this subject please feel free to contact me at (510) 823-7672 or Ron Havens, NIIF Assistant Moderator, at (913) 624-6881.

Sincerely,

Allan D. Jones
NIIF Moderator

cc: Kathleen Levitz, Deputy Chief, Common Carrier Bureau
Peter Guggina
Marc Cathey
David Loose, Co-Leader, SNAC
Marlene Nickolson, Co-Leader, SNAC

SMS/800

6 Corporate Place • Piscataway, NJ 08854-4157
Phone (908) 699-2100 • Fax (908) 336-3295

July 1, 1997

To: All Responsible Organization (Resp Orgs) Primary Contacts

The attached report provides data on growth of Toll Free Numbers in Use as of June 30, 1997.

Sincerely,

Anil Patel

Toll Free Numbers In Use (06/30/97)

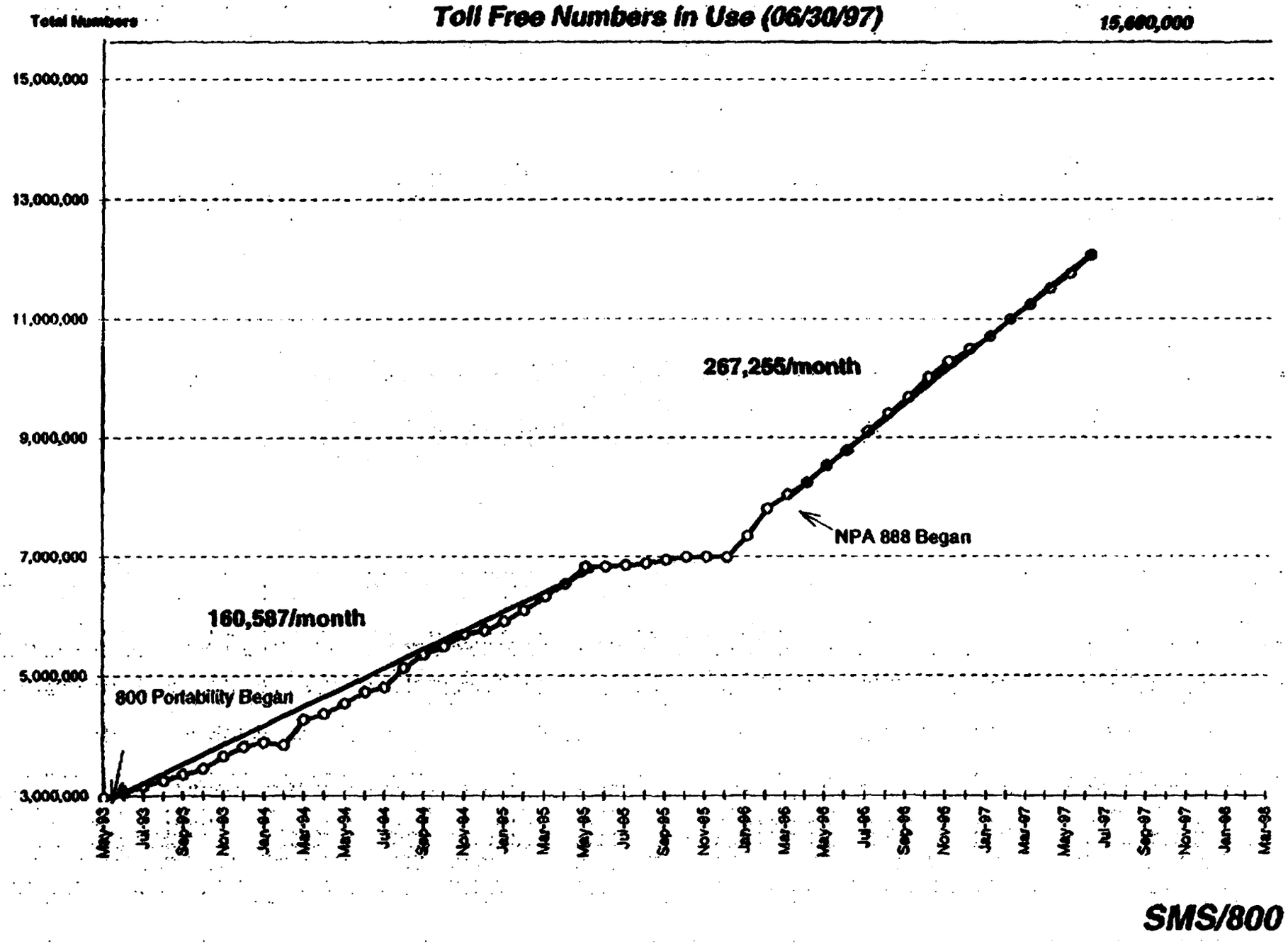
Month-Year	Total Numbers in Use	Number Growth /Month
Sep-94	5,347,395	227,028
Oct-94	5,482,698	135,303
Nov-94	5,693,270	210,572
Dec-94	5,748,603	55,333
Jan-95	5,903,940	155,337
Feb-95	6,090,021	186,081
Mar-95	6,322,494	232,473
Apr-95	6,539,682	217,188
May-95	6,823,941	284,259
Jun-95	6,822,167	-1,774
Jul-95	6,847,502	25,335
Aug-95	6,877,128	29,626
Sep-95	6,940,233	63,105
Oct-95	6,984,598	44,365
Nov-95	6,989,750	5,152
Dec-95	6,987,338	-2,412
Jan-96	7,338,722	351,384
Feb-96	7,797,292	458,570
Mar-96	8,034,347	237,055
Apr-96	8,238,117	203,770
May-96	8,526,865	288,748
Jun-96	8,772,565	245,700
Jul-96	9,100,286	327,721
Aug-96	9,400,104	299,818
Sep-96	9,679,583	279,459
Oct-96	10,020,087	340,524
Nov-96	10,276,854	256,767
Dec-96	10,487,881	211,027
Jan-97	10,711,040	223,159
Feb-97	10,993,292	282,252
Mar-97	11,244,041	250,749
Apr-97	11,507,711	263,670
May-97	11,763,082	255,371
Jun-97	12,073,365	310,283

(A) Total SPARE Numbers: **3,616,635**

(B) Average Demand/Month: **276,441**
(Last 3 Months)

(C) A ÷ B = **13.1 months**

[redacted]


Toll Free Numbers in Use (06/30/97)
Total Numbers
15,660,000
15,000,000
13,000,000
11,000,000
9,000,000
7,000,000
5,000,000
3,000,000
267,255/month
NPA 888 Began
160,587/month
800 Portability Began
May-93
Jul-93
Sep-93
Nov-93
Jan-94
Mar-94
May-94
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Jan-97
Mar-97
May-97
Jul-97
Sep-97
Nov-97
Jan-98
Mar-98
SMS/800

Alliance for Telecommunications Industry Solutions

Ordering and Billing Forum

Re: 888 FACT SHEET INPUT TO FCC FROM THE ATIS-SPONSORED SMS NUMBER ADMINISTRATION COMMITTEE ("SNAC") OF THE ORDERING AND BILLING FORUM ("OBF").

In response to the FCC request for input to their 888 Fact Sheets, SNAC participants offer the following comments.

Points Noted:

1. It was noted that Question 12 on the Fact Sheet refers people to DSMI to obtain the Primary Contact list, (normally escalation point, not customer service centers) although the SNAC has requested that people should contact their Service Providers.

   It was suggested that a separate list of RespOrgs contacts could be created and provided to end users upon request (e.g., appropriate sales/RespOrg centers & numbers).

2. It was noted that Question 20 should be updated to clarify that the number of RespOrgs is ever increasing.